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PREVALENCE AND CHARACTERISTICS OF IDIOPATHIC RIGHT VENTRICULAR OUTFLOW TRACT ARRHYTHMIAS ASSOCIATED WITH J WAVES

ACC Poster Contributions
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Session Title: Clinical Electrophysiology --Ventricular Arrhythmias
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Background: The relationship between J waves during sinus rhythm and idiopathic ventricular tachycardia (VT) or premature ventricular complexes (PVCs) originating from the right ventricular outflow tract (RVOT) has not been reported. The aim of this study was to investigate the prevalence and characteristics of idiopathic RVOT-VT/PVCs associated with J waves.

Methods: The study enrolled 121 consecutive idiopathic RVOT-VT/PVC patients (mean age 45 ± 16 years, 46 males) undergoing radiofrequency catheter ablation (RFCA). The prevalence of J waves was assessed. The clinical and electrophysiological data were compared between the patients with J waves (J-wave group) and those without (Non-J-wave group).

Results: J waves were present in 53 (43.8%) idiopathic RVOT-VT/PVC patients. The distribution of the J waves was as follows: Inferior leads = 62%, inferior-lateral leads = 24.5% and lateral leads = 13.2%. The J-wave group had a higher incidence of sustained VT (22.6% vs. 3.5%, $P<0.01$), shorter VT cycle length (303 ± 56 msec vs. 351 ± 62 msec, $P<0.01$) and more episodes of syncope (16% vs. 3%, $P<0.05$) than did the Non-J-wave group. There were no significant differences between the 2 groups in terms of the success rate of RFCA (90.9% vs. 88.8%, $P= 0.72$) or clinical outcome: No ventricular fibrillation, syncope or cardiac sudden death were observed in any patients during the follow up period.

Conclusions: There was a high prevalence of J waves in the idiopathic RVOT-VT/PVC patients. J waves may play an important arrhythmogenic role in high risk idiopathic RVOT-VT patients.